



US010672167B2

(12) **United States Patent**  
**Albouze**

(10) **Patent No.:** **US 10,672,167 B2**  
(45) **Date of Patent:** **Jun. 2, 2020**

(54) **GENERATING SYNTHETIC GROUP SELFIES**

(71) Applicant: **Apple Inc.**, Cupertino, CA (US)

(72) Inventor: **Jean-Francois M Albouze**, Santa Cruz, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/033,135**

(22) Filed: **Jul. 11, 2018**

(65) **Prior Publication Data**

US 2019/0102924 A1 Apr. 4, 2019

**Related U.S. Application Data**

(60) Provisional application No. 62/565,362, filed on Sep. 29, 2017.

(51) **Int. Cl.**

**G06T 11/60** (2006.01)  
**H04N 5/262** (2006.01)  
**H04N 1/387** (2006.01)  
**H04N 5/272** (2006.01)  
**H04N 7/14** (2006.01)  
**H04N 7/15** (2006.01)

(52) **U.S. Cl.**

CPC ..... **G06T 11/60** (2013.01); **H04N 1/387** (2013.01); **H04N 5/2621** (2013.01); **H04N 5/272** (2013.01); **H04N 7/144** (2013.01); **H04N 7/147** (2013.01); **H04N 7/15** (2013.01)

(58) **Field of Classification Search**

CPC ..... G06T 11/60; H04N 5/272  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

2016/0057363 A1\* 2/2016 Posa ..... H04N 5/272 348/239  
2016/0093020 A1 3/2016 Basalamah et al.  
2016/0094651 A1\* 3/2016 Basalamah ..... G06T 11/60 709/204  
2016/0156874 A1 6/2016 Rajagopalan et al.  
2018/0089746 A1\* 3/2018 Cooke ..... G06Q 30/0635  
2019/0037135 A1\* 1/2019 Hedge ..... H04N 5/23229

\* cited by examiner

*Primary Examiner* — Ryan R Yang

(74) *Attorney, Agent, or Firm* — Invoke

(57) **ABSTRACT**

In some implementations, a computing device can generate a synthetic group selfie. For example, a synthetic group selfie can be an arrangement or composition of individual selfies obtained from a plurality of computing devices into a single group image (e.g., synthetic group selfie). The individual selfie images can be still images, stored video images, or live streaming images. Thus, the synthetic group selfie can be a composition of still images, stored video images, or live streaming video images. The computing device can automatically arrange the individual selfies into the synthetic group selfie. The synthetic group selfie can be stored as a multi-resource object that preserves the individual selfie images so that the user who created the synthetic group selfie or a recipient of the synthetic group selfie can modify the arrangement of the individual selfies within the synthetic group selfie.

**24 Claims, 15 Drawing Sheets**

